The academic–practitioner gap in Spanish LIS: an analysis of authorship and collaboration in two leading national publications

Jordi Ardanuy (jordi_ardanuy@ub.edu): orcid.org/0000-0001-8453-586X
Cristóbal Urbano (urbano@ub.edu): orcid.org/0000-0003-0935-6436

Universitat de Barcelona. Departament de Biblioteconomia, Documentació i Comunicació Audiovisual

C/ Melcior de Palau, 140. Edifici UB-Sants
08014 Barcelona (Spain)

Abstract

It is not unusual to hear that a significant separation or divergence exists between the interests of LIS professionals who work in library and information services and those who are university teachers. This division results in limited cooperation between the two communities and further debilitates already weak international collaboration in the discipline. This article first conducts a qualitative review of the various types of literary evidence that address the divergence and lack of cooperation, and subsequently presents quantitative evidence for the Spanish geographical context.

Keywords: research-practice gap, library and information science, Spain, scientific collaboration, co-authorship analysis, publication output

Introduction

In recent years, a recurring message coming from LIS practitioners working in library services or information and documentation centres is that they feel isolated from the activity of university teachers. Increasingly intimidated by the "publish or perish" culture, it seems the latter may be falling into the temptation of shutting themselves away in an ivory tower, immersed in subjects of fashionable interest that will generate academic audience and, above all, citations.

In LIS, the lack of harmony between knowledge creation and its professional consumption poses a major threat and impedes a coordinated response to the huge number of challenges faced wherever the discipline has a presence. The necessary advance into new subjects and the exchange of knowledge with other fields must not take place in detriment to relationships with the professional sectors linked to LIS research fronts and teaching proposals.

The basis of this article is an assumption that LIS research is suffering from a degree of international isolation and a tendency towards ever weaker cooperation between academics and practitioners. Rectifying this situation is vital at a time when the discipline is at a crossroads of digital transformation that will require a commitment to research, development and innovation. In meeting this challenge, the existence in a particular geographical area of sufficient critical mass of human and material resources, of intellectual and professional interactions, is a necessary condition both for the progress of an academic branch of knowledge as well as for the consolidation of a professional space.

This concern has received attention in previous papers on deficits in international collaboration and co-authorship (Ardanuy and Urbano, 2015a, 2015b). Following the same line, the present work examines the gap in Spain between practitioners and academics which, along with international isolation, is reducing the critical mass of creative interactions. Equally important, this disaffection between the two groups is also limiting opportunities for the receipt of knowledge and its application to innovation and development, at the same time as it contributes to the increasing impoverishment of university teaching.

Context and literature review

Because the academic–practitioner gap is a reality present in numerous disciplines and countries, a sufficient volume of literature exists on the subject to enable the initial perceptions of this phenomenon in LIS to be considered relevant. Echoes of the discussion can also be found in other fields, including political sciences and administration (Bushouse et al., 2011), management and business sciences (Chanal, 2012; Mesny and Mailhot, 2010), ergonomics (Chung and Shorrock, 2011), education (Greenwood and Abbott, 2001) and social work (Hudgins and Allen-Meares, 2014). Finally, beyond specific disciplines, the recognized need to achieve the best possible relationship between university and business or public-service activity (Thune, 2007) means the global dimension of the issue under consideration must be acknowledged. In short, concern about the "research-to-practice gap" as an expression of the disconnection between practice and academia is encountered in all manner of disciplines, as evidenced by the multitude of papers[1] that contain the term.

Focusing on the international situation of the academic–practitioner gap in LIS reveals that it has been significantly present for many years, as David Bawden (2005b) pointed out in an editorial of the *Journal of Documentation* aptly entitled "Research and practice in documentation". The interest and importance of the subject have also been accredited in one of the most detailed studies of the divide and its effects in the United Kingdom (Cruickshank et al 2011).

In fact the literature more than demonstrates that this relationship between theory and practice, research and application, academia and the world of practice is also far from satisfactory in many other disciplines. The problem has been examined from a wide variety of approaches, which may be grouped into the following lines: 1) study of the receipt and use of scientific production as a source of material for professional practice; 2) evaluation of research in terms of its social and professional impact; 3) study of the implicit or explicit investigation and innovation agendas of the different agents; 4) evaluation of LIS professionals' university training programmes; and 5) analysis of the volume and characteristics of authorships in the discipline's specialized publications.

Following the first line, we conduct an analysis of information consumption by practitioners and their assessment of LIS research works or journals as a source of information for the

---

[1] A simple search on Google Scholar for the "research-to-practice gap" string returned 2700 hits (17/07/2016), a number that increases substantially when the same concept is reworded in other searches.

exercise of their profession (Brown and Ortega, 2005; Eve and Schenk, 2006; Haddow and Klobas, 2004; Hjørland, 2000; Schlögl and Stock, 2008). This is a highly appropriate way of discovering the barriers to closer cooperation between research and professional practice. A low level of attention towards certain academically-oriented communication channels indicates early disconnection, due either to a lack of relevance and usefulness of these publications for professional purposes or to a less than ambitious vision in the bibliographic basis of the practitioner's proposals. The indications of limited consideration being given to scientific literature, that is, to professional updating with a broad intellectual scope, have already been a subject of study in works that analyze the evaluation and status of LIS research from the point of view of professional practice (McClure and Bishop, 1989; Powell et al., 2002).

The second line considers works that have studied the gap from the perspective of evaluating investigation and publications and the limited impact of research projects on practice (Cruickshank et al., 2011), also encompassing the reservations of each community as regards the value of the other's contribution. In this respect, in LIS as in other disciplines it is not uncommon to hear statements such as those made by Booth (2003) claiming that research led by practitioners has been repeatedly criticized for its lack of rigour, and that of academics for its lack of practicality. Thus, serious difficulties to establish the social impact and applicability of academic-led research projects must be added to the usual problems associated with assessing the merits of studies promoted from the field of academia.

In third place we find a subject of major importance, the role of practitioners in guiding research agendas (Goulding, 2007; Maceviciute et al. 2009; Wilson and Maceviciute, 2009). It is interesting to see how the study of mechanisms for constructing research agendas in LIS is inseparable from the debate on mechanisms to enhance the theory–practice connection, form teams with sufficient critical mass and plurality of perspectives or optimize the resources invested in research (Hall, 2010, 2011; McKee, 2007; Ponti, 2012; Roberts et al., 2013). Unfortunately, however, communication with practitioners precisely when explicit research agendas are being formulated remains a somewhat exceptional procedure and has consequently received much less attention than it should. In contrast, a good number of papers describe how subjects of interest in the professional bibliography have evolved over time, as a way of exposing implicit agendas, fashionable topics and research fronts (Järvelin and Vakkari, 1993; Tuomaala et al. 2014). These are works that objectively reflect academia's notable level of isolation when determining its research interests. In relation to the exploration

of lines of research, Bawden (2008) analyzes the content of the first two volumes of the *Journal of Information Science* (1979 and 1980) in order to trace the development of subjects of major interest over the following thirty years. He highlighted the "relation between discipline and profession" as one of the five principal lines of analysis – a powerful indicator of the significance of the issue under consideration in the present article.

Examination of the necessary link between research and development-innovation proves especially interesting when studying research agendas. The very existence of the R&D&I label should be reason enough for reflection in disciplines like LIS, in which it appears less frequently than it should. This is the case despite LIS research being practice-oriented and seen in its origins as a way of rigorously systematizing development and innovation on the basis of academic criteria, through publication in professional media (Williamson, 1931). In fact a good deal of the investigation undertaken in LIS could be classified as "applied", so the relationship between academic research and the development and innovation carried out by practitioners ought to be routine. In this regard, the "Evidence Based Library and Information Practice (EBLIP)" movement (Booth, 2003, 2011) represents an interesting but as yet little exploited focus which could help better connect academia and practice, and which is being enthusiastically received in such disciplines as clinical medicine and nursing.

Innovative initiatives for formulating research agendas or the revamping of professional publications in line with the EBLIP model could be fertile ground for the "engaged scholarship" proposed by Van de Ven and Johnson (2006) in the field of management. This is a methodology for overcoming "the rigour–relevance gap" which frequently justifies the rift between practitioners and researchers. Van de Ven and Johnson consider that the design of projects through the engaged scholarship approach has huge potential to transform the LIS academic world: confronting issues and relevant questions arising out of reality; basing the design of research projects on collaborative learning communities; temporarily extending collaboration activities beyond specific situations; and, finally, employing multiple models and methods of approaching a problem. Cox (2012) chooses to link research in LIS with an epistemological rationale based on "practice theories", raising the horizon of the connection between research and professional practice to the level of a principle that should govern the scientific methodology.

The fourth element to be considered is that of the practice-academia connection in updating and improving LIS educational programmes. The flaws inherent in teaching proposals that are

disconnected from professional practices or that ignore research as a source of curricular renewal or teaching methodology are a well-founded cause for concern (Finlay et al. 2012). The mistrust of research as an element of curricular planning must also be seen as the result of a restrictive "professional paradigm" (Delgado López-Cózar, 2001) which holds that education in LIS should limit itself to preparing students in the technical aspects of the profession. This focus is increasingly questioned. Professional practice is a dynamic exercise, currently subject to a digital reality for which practitioners must be well trained, with knowledge and attitudes fostered through research. Along the same line, McClure and Bishop (1989) endorse the theory indicated in the early works of Williamson and Shera that it is possible to speak of a "fundamental antipathy in librarianship towards the application of scientific scrutiny to a profession steeped in idealism and to practice based on art". This situation has shaped a discipline which, on occasions and within the university, has been more concerned with preserving a way of being and behaving, with protecting a tradition, than with creating new knowledge. However, at present the need for closer collaboration seems essential in all matters relating to research and development, necessary for the digital transformation of information units and services, libraries and specialized centres which, to a large extent, will have to act as a laboratory for teachers in LIS.

Finally, we refer to a significant volume of works that conduct in-depth analysis of authorship in LIS publications (Finlay et al. 2013; Joswick, 1999; Schlögl and Stock, 2008; Walters and Wilder, 2016). The degree of collaboration revealed by co-authored papers and the co-existence of works from both communities in certain publications are good general indicators of the healthy relationship between academia and the professional world. Study of the motivation that drives authors to publish and their choice of medium in which to do so has been examined far more among academics than among practitioners, although several works exist based on surveys of the two groups (Berg et al., 2012; Clapton, 2010; Dalton, 2013; Klobas and Clyde, 2010; Sugimoto et al., 2014). These enable various factors to be assessed, including the recognition and prestige enjoyed by a university-level professional working on a PhD, publishing in journals and contributing to congresses from the position of a practitioner (Dongardive, 2013).

It is the aspect referring to analysis of authorship that we have chosen to use in this paper to make a first approach to the situation of the academic–practitioner gap in Spain. This type of analysis is present in many works, among which the US-conducted study by Walters and

Wilder (2016) stands out for being both current and thorough. In any case, it is evident that the relative weight of different agents in the distribution of authorships in specialized LIS publications is dependent upon the diverse cultures of scientific communication among the professionals of each country, types of professional profile and, in particular, assessments made of the specialized literature by each community on the basis of the goals pursued. The culture in US university libraries of professional promotion based on academic criteria, together with the involvement of a large number of professionals on the editorial boards of internationally recognized journals explains that country's significant performance as regards authorship in high-impact publications (Stewart, 2011; Swigger, 1985; Walters and Wilder, 2016). This contrasts with the current trend in Europe, which may be inferred from the situation in Italy (Ardanuy and Urbano 2015b) or in Spain, as clearly indicated in this article.

While studies on the nature of authorship in Spanish LIS publications have been relatively frequent (Ardanuy, 2012), no recent works exist that bring together the development of such authorship over time with detailed analysis of whether that authorship was academic, practitioner or mixed. However, some of the aforementioned papers substantiate academic–practitioner separation in Spain, in particular the study on research fronts through co-citation analysis by Moya-Anegón et al. (1998), which identifies the practitioner community as a clearly segregated cluster with its own personality. Despite the passage of time, data collected in the cited works continue to be reflected in the current trend, a phenomenon the present study sets out to demonstrate.

The indicators and reflections mentioned in previous sections clearly suggest the existence of a gap between the worlds of LIS practitioners and academics. This paper intends to provide ratification and quantitative evidence of this gap, and to be a first approach to describing its extent and evolution. The method chosen to do so is analysis of the relative volume of each community's authorship and of their collaboration in co-authored works in two settings that have traditionally been a meeting point for practitioners and academics in Spanish LIS: the *Jornadas Españolas de Documentación* (JED) [Spanish Conferences on Documentation] and the journal *El profesional de la información* (EPI).

These two publications have been chosen because both have been a benchmark for a long period as a source of information for professionals, so that, focusing in those publications we can draw better the gap.

Materials and methods

Information sources analyzed

This article aims to describe how the co-existence of practitioners and academics has evolved over a long period of time in two settings designed to favour professional communication and considered in the Spanish context to be mediums with a certain degree of recognition for published research. The sources chosen are the Spanish Conferences on Documentation (JED) and the journal *El profesional de la información* (EPI), following the line taken by previous studies analyzing co-authorship in the discipline (Ardanuy and Urbano, 2015a, 2015b). This approach was designed to identify opportunities to broaden the basis of connections necessary to conduct more robust LIS research with a greater critical mass of actors.

Established in 1984, the Spanish Conferences on Documentation (JED)[2] have been held biennially since 1990. Due to the size and scope of the event, over its fourteen editions it has become Spain's most important conference on libraries, information and documentation. The activity is organized by the Spanish Federation of Societies of Archivists, Librarians, Documentalists and Museologists (FESABID), a private-law entity which brings together the leading professional associations in the documentation and information management sector.

The journal *El profesional de la información* (EPI) was first published in 1992 as *Information World en Español*, a LIS-sector newsletter. It adopted the current title in 1998 when it began publishing articles reviewed by a scientific advisory committee in addition to news and reports. This transformation was reflected by increased inclusion of the journal in various international databases. Its selection is justified for two reasons: EPI was the first Spanish magazine in its field to be present in the WoS (SSCI, 2006), which enabled its impact factor to be calculated in the *Journal Citation Reports (JCR)* as from 2009; and of all Spanish publications in WoS, it is the journal whose origin was most professionally oriented, as its name reveals.

Contributions considered

All of the pieces published in both mediums (JED and EPI) have been analyzed irrespective of the type of work they represent – invited lectures, papers or posters in the case of the JED conferences and any kind of article in EPI. All of the production has been included, rather than

---

[2] The name of the conferences has evolved over time, with other titles including the *Jornadas Españolas de Documentación Automatizada*, and was established more recently as the *Jornadas Españolas de Documentación*.

solely or strictly research works, as the aim is to analyze the relative presence and degree of collaboration between practitioner and academic communities in two mediums whose origins lie in the professional sphere.

Identification of works and author affiliation

JED and EPI reference data were sourced from the publications themselves[3]. The categorization of author profile as practitioner or academic was made on the basis of the position the author held. For example, documentalists who work in the media or librarians assigned to a university information unit were considered practitioners. A university teacher was classified as an academic, as was a CSIC (Spanish National Research Council) researcher. However, since one of the essential aims was to clearly discriminate authors' profiles and although the reference information was obtained from the sources (articles and papers), all affiliations and assignments were individually checked. This was a consequence of various anomalies observed during data collection.

These included the existence of a number of articles and papers in which only the authors' names appear, without any specific affiliation; or with affiliation but no assignment; or with the name of the university but no indication of the post occupied (teacher, librarian, student, etc.). Another, more conflictive situation as regards producing errors, was that of part-time assistant lecturers who, according to Spanish law, are recognized specialists who exercise their professional activity outside the university academic environment[4]. Since in LIS they are usually employed in information units they must, by definition, be considered practitioners. However, it is quite common for assistant lecturers to cite the university department in which they teach as their affiliation when publishing an article, rather than the position which occupies the major part of their professional activity. Consequently, we have applied the criterion used by Walters and Wilder (2016), thus enabling our results to be compared to their recent international study.

---

[3] In the case of EPI, from its complete digital version available at http://recyt.fecyt.es/index.php/EPI/issue/archive, also available with a three-year embargo at http://www.elprofesionaldelainformacion.com/contenidos.html. In the case of JED, printed and online versions were used for reasons of availability at the time of retrieving the data. Both are currently available at http://www.fesabid.org/federacion/actas-de-las-jornadas-espanolas-de-documentacion, except those of 1998.
[4] Organic Law 4/2007, of 12 April.

Much less significant in terms of volume is the situation of PhD students (graduate assistants). If their work is directly linked to their training as researchers and they are not merely support technicians they are generally considered academics.

To complete this information we consulted university and CSIC directories, and provisions in official gazettes regarding appointments of lecturers and library officials, grants awarded and so on. The curricula of authors on LinkedIn[5] proved particularly useful for the chronological detail of their professional activity. The EXIT[6] directory was also useful, but to a lesser extent due to the absence of data or lack of updated information. In many cases authors post their curriculum on their own website. The directories and other sources of information pertaining to companies and organizations to which the author was linked at the time in question were also consulted.

Changes of profile (practitioner or academic) or of affiliation during the study period were also taken into account, assigning that which applied at the respective time. When an author presented two or more academic profiles we determined which was primary.

Results and discussion

We first consider production in the EPI. Authorship analysis was conducted on a total of 1,643 pieces corresponding to all types of works, from peer reviewed research papers to notes and reviews. During its first stage of publication, starting in 1992, the journal's main function had been to channel developments and news, which continued to be the case in 1998 and 1999. This explains why, in those first two years analyzed, the number of pieces was significantly higher than the subsequent average, which remained stable at around 80 works per year.

---

[5] http://www.linkedin.com
[6] Directory of experts in information handling, http://www.directorioexit.info

**Figure 1. Evolution of the annual number of articles in EPI**
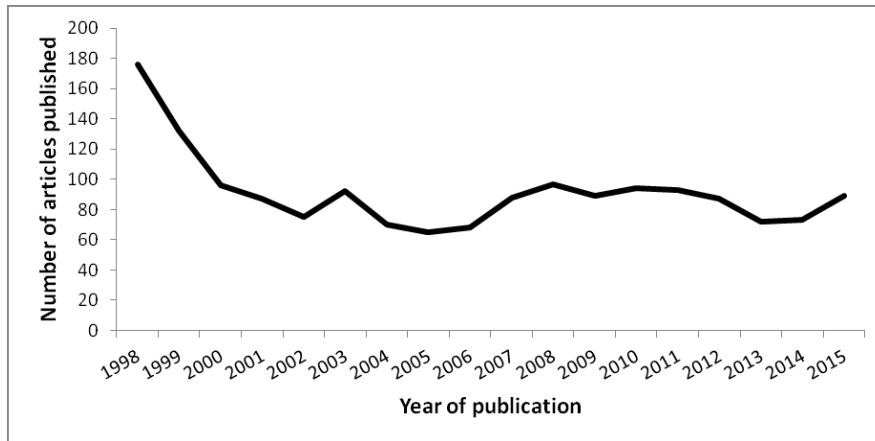
In absolute terms, the JED conferences have evolved since the early days in which their organization prioritized diversification, training issues and a degree of generalization. The sessions are now the result of a more selective process, featuring papers that focus on news, real developments and conclusions. In all, 813 communications were analyzed. Figure 2 shows the clear fall in the number of accepted contributions in recent years, primarily the result of a more intense filter and fewer attendees, but also due to a general increase in this type of event, which has produced a certain amount of audience fragmentation. Note that the figure for contributions in 2015 comprises 20 communications and 26 posters, the latter being introduced for the first time that year.

Figure 2. Evolution of the number of communications in editions of the JED
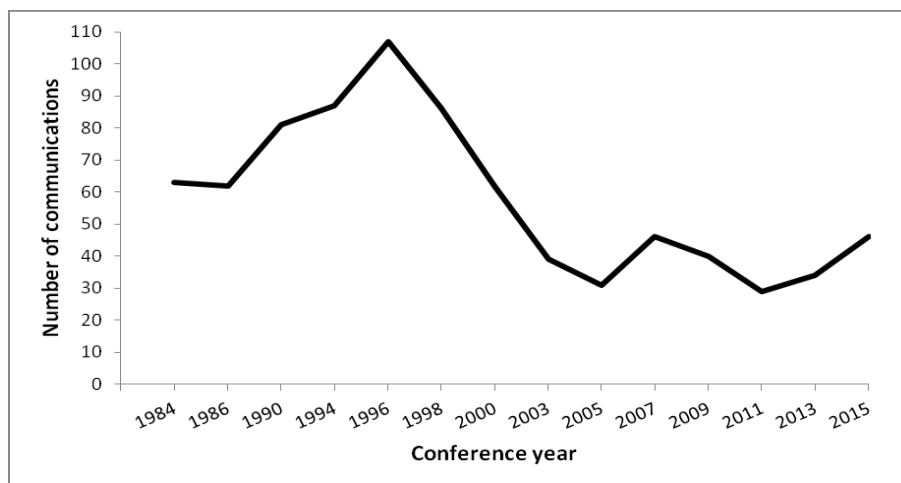
In the case of EPI, if we measure the level of co-authorship as the number of authors per article and discount the 20 works lacking individual identification (published under a group name or anonymous), the average number of authors per article rose from 1.1 in 1998 to 2.2 in 2015, with a peak of 2.4 in 2011 (Figure 3). The median of authors per article was 1 until 2009, when it rose to 2. The JED conferences also present a marked increase, from the 1.5 of 1984 to 3.2 in 2015. In this case the median is more erratic, reaching a high of 2.5 authors per article in the 2015 edition.

Figure 3. Evolution of the average number of authors per contribution in EPI and JED
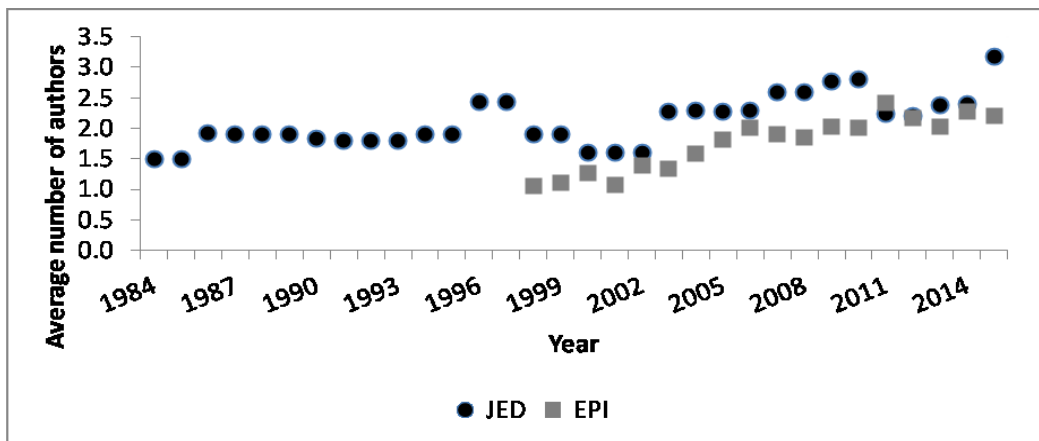
Increased collaboration in terms of co-authorship had already been observed in the Spanish context, as had a higher average number of authors in congresses (Ardanuy 2012).

In the following paragraphs we analyze the share of participation according to practitioner or academic author profile, focusing first on EPI. In all, some 1,306 academic and 1,436 practitioner authorships were identified. During the 18-year study period the share of authors from the academic sector rose from 12.3% in 1998 to 70.8% in 2015, which corresponds to an inverse evolution in the participation of practitioners, from 87.7% in 1998 to 29.2% in 2015 (Figure 4). This is explained by more articles being published with the participation of authors from the academic sector and by a gradual rise in the number of authors per article coinciding, over the years, with an increasing presence of research papers led by academics. In fact, the Pearson correlation coefficient between the evolution of the percentages of academic authorships and that of the average number of authors per article is 0.9612.

Figure 4. Evolution of the percentage of authorships in EPI by author profile
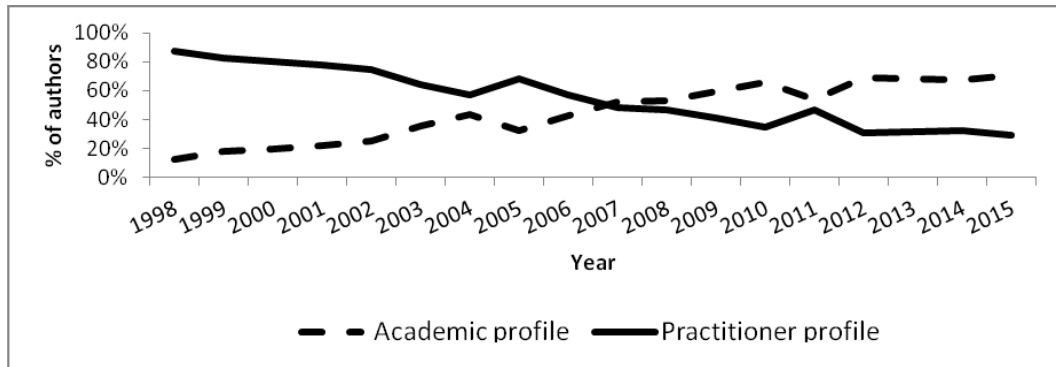
In the light of these data, can we argue that EPI, a journal which explicitly carries the word "professional" in its name, is no longer a practice-oriented journal? Walters and Wilder (2016) establish a quantitative indicator to make this determination, which defines such publications as those to which librarians contribute at least 1.5 times the number of articles submitted by any other group of authors

Transfering this criterion to the ratio of practitioner and academic authorships, we see that in the first year of our study (1998) EPI fits perfectly into the category of practice-oriented journals, with a ratio of 7.1 (Table 1). However, a sharp fall in the coefficient – 81.7% in six years – shows 2004 to 2006 as the period in which the magazine ceased to be this kind of publication.

Table 1. Ratio between the number of practitioner and academic authorships

Year	Practitioner authorships (Pa)	Academic authorships (Aa)	Ratio=Pa/Aa
1998	164	23	7.1
1999	120	26	4.6
2000	98	24	4.1
2001	73	21	3.5
2002	78	26	3.0
2003	78	43	1.8
2004	63	48	1.3
2005	74	35	2.1
2006	74	55	1.3
2007	75	81	0.9

The academic–practitioner gap in Spanish LIS: an analysis of authorship and collaboration

in two leading national publications / J. Ardanuy & C. Urbano. Post-print version (accepted 2016-Nov-10th)   [13]

| 2008	82	93	0.9
2009	73	106	0.7
2010	65	124	0.5
2011	104	120	0.9
2012	58	131	0.4
2013	46	100	0.5
2014	54	112	0.5
2015	57	138	0.4

The EPI phenomenon follows the pattern that Walters and Wilder (2016) attribute to Spanish authors in their choice of international magazines. The cases of USA and Spain are completely opposite, due mainly to most US universities according librarians academic status. In their study, the aforementioned authors observe that while 36% of articles are written by academic authors from the USA, the proportion soars to 70% in practice-oriented journals. Note, however, that practitioners tend to publish in publications closer to their professional practice, as occurs with EPI.

Though the case of EPI is striking, numerous studies indicate a generalized reduction in practitioner representation as authors of articles in LIS journals. This may be due to their channelling much of their publication into the social media (Weller et al., 1999; Schlögl and Petschnig, 2005; Wiberley et al., 2006, Finlay et al., 2013; Walters and Wilder, 2016).

The JED conferences were conceived as a meeting point for providers and users of information services. Note that LIS studies were not officially incorporated into the Spanish university system until 1978, and that the first faculty to establish a LIS-related curriculum did not do so until the 1982-1983 academic year. This situation is reflected in Figure 5, with authors stating university affiliation making up less than 20% of those present at the first JED in 1984.

In all, 589 authorships correspond to academics and 1,132 to practitioners. However, analysis of the chronological evolution of this participation clearly shows a divergent-convergent process, reflected in the "double-scissor graph" of Figure 5.

Figure 5. Share of presence by practitioners and academics in the JED communications
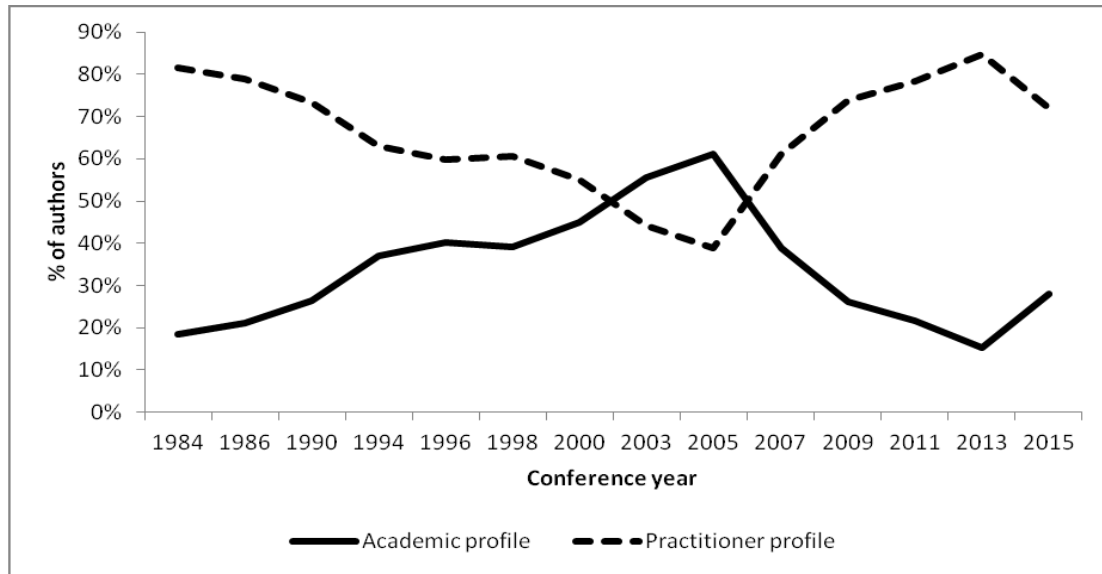
Some of the reasons for this fall in attendee numbers may be found in the regulations of the Spanish scientific evaluation agencies. In late 1994, the Comisión Nacional de Evaluación de la Actividad Investigadora (National Commission for the Evaluation of Research Activity, CNEAI) established specific criteria for individual research activity over six-year evaluation periods, in which participation in congresses could be considered only on a complementary basis[7] (Delgado López-Cózar, Jiménez-Contreras, Moya-Anegón, 2003). As time passed, the realization that such participation counted for little and that the primary value lay in publishing articles in academic journals with impact factor discouraged congress attendance. A similar effect was brought about by creation of the Agencia Nacional de Evaluación de la Calidad y Acreditación (National Agency for Quality Assessment and Accreditation, ANECA) and other regional agencies[8] with authority to assess candidates who wish to become full-time teachers at public universities. In the quest for scientific production that best fulfils the requirements of these agencies, preference is given to articles in journals. Thus congresses have taken a back seat, reduced to simple meeting points to establish contacts, in particular with other academics rather than with practitioners.

Irrespective of the percentage of authors from one community or the other present in a publication or congress, the collaboration between practitioners and academics demonstrated

---

[7] Ministerial Order, 2 December 1994, Article 7.
[8] Organic Law 6/2001, of 21 December, on Spanish Universities, Articles 31 and 32. Agreement of the Council of Ministers of 19 July 2002.

in co-authorship statistics is a solid indicator of their exchange and proximity with regard to R&D activities and may be observed using bibliometric methods.

In this context, the volume of works in EPI signed by authors from both profiles is limited but growing over time, except for a pronounced reduction in 2015 (Figure 6).

Figure 6. Evolution of the percentage of articles published in EPI with presence of authors from each profile
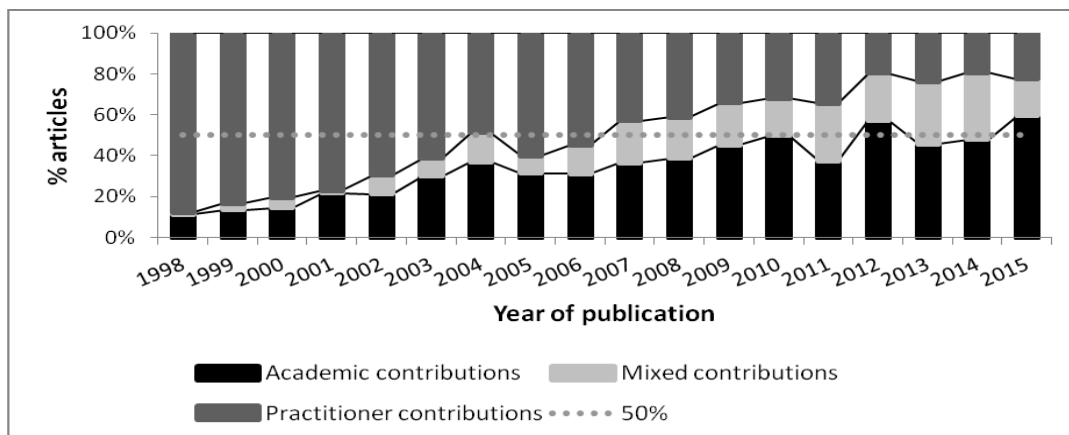
In the case of the JED conferences (Figure 7), the number of mixed contributions with co-authors from each profile is also reduced. Note that between 1998 and 2007 an interesting effect took place in which contributions with the presence of academic profile authors (both purely academic and mixed authorships) reached or exceeded 50% of the total. The peak of 2005, with 83.9%, may be explained by the almost 30% of mixed contributions, a value that rose to 37% in 2007.

In general, two types of practitioners predominate in the mixed profiles: part-time assistant lecturers, who work mainly in information units but also offer their professional know-how in teaching activities; and a smaller group who work in university libraries but do not teach in state-regulated education.

Figure 7. Evolution of the percentage of contributions in JED conferences with presence of each profile, highlighting mixed profile contributions
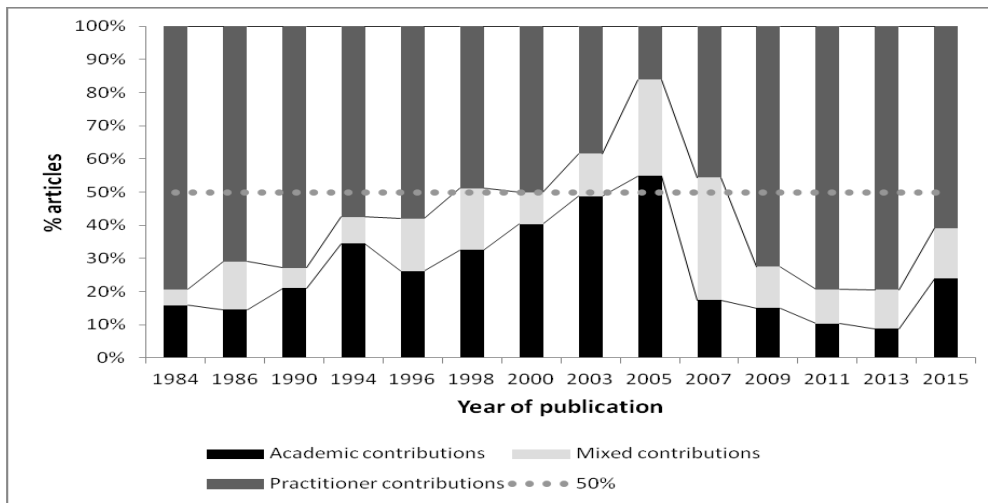
In terms of affiliation, most of the academics work in universities (87.3% in JED and 93.6% in EPI). Research centres, especially the CSIC, comprise the affiliations of the remaining academic profile authors. This majority reflects the Spanish reality, in which most of academia is concentrated in the universities. Note that although JED and EPI are entirely open to international collaboration, only 0.9% of authors in the JED conferences and 9.5% in EPI have a non-Spanish affiliation.

The highest percentage of practitioner authors corresponds to those linked to a library environment: 36.3% in the case of EPI, with university library professionals making up a notable 14.7%. In the JED conferences the figure is 24.8%, but here the greatest contribution comes from research centre library services (8.0%). The remaining percentage is distributed over documentalists and other types of technicians and managers in all manner of organizations (public entities, businesses, foundations, associations, etc.).

Shifting the focus towards a gender-based perspective, overall authorships present a difference between what happens in the JED conferences and the situation with EPI. While men predominate in the latter, women are the JED's main contributors (Table 2). Evolution of the percentage weight by gender and profile is shown in figures 8 and 9.

Table 2. Percentage of practitioner and academic authorships by gender

		Practitioner	Academic	Total
EPI	Women	22.1%	16.1%	38.2%
	Men	30.3%	31.5%	61.8%
	Total	52.4%	47.6%	100.00%
JED	Women	39.9%	15.6%	55.5%
	Men	25.8%	18.7%	44.5%
	Total	65.7%	34.3%	100.00%

Figure 8. Evolution of the percentage of authors in JED conferences by gender and profile
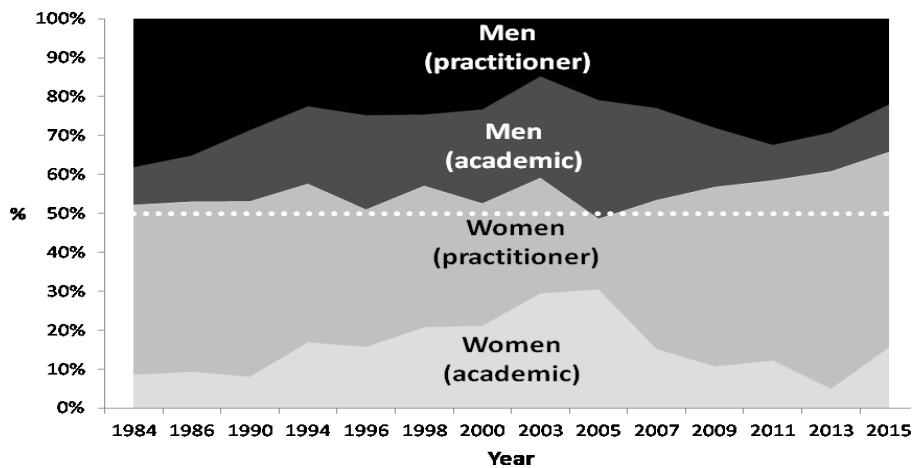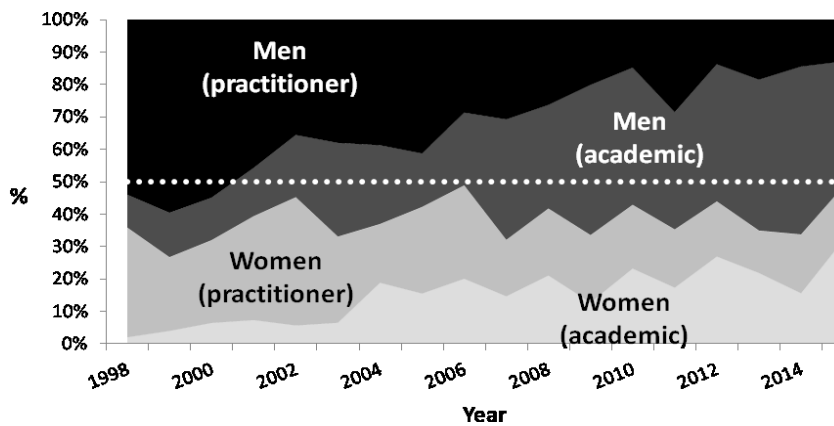

Figure 9. Evolution of the percentage of authors in EPI according to gender and profile

Taken as a whole, the data show an increase in participation by women. In the case of the JED conferences, women with a practitioner profile represented around 50% of authors (±5%) in the last four editions. In that of EPI however, this position corresponds to academic men, with only slightly lower percentages. In any case, women with an academic profile form the group with the lowest level of global participation, following the line revealed in previous studies that show limited participation and leadership by women in the Spanish social sciences and humanities research system (García-de-Cortázar et al., 2006; Torres-Salinas et al., 2011). This situation contrasts with the well-recognized female predominance in the profession in Spain, and in the male–female balance in academia[9].

Conclusions

Based on the examination of authorship types in the publications studied in this paper it is clear that a gap exists between the practitioner and academic sectors in Spain.

In the first place, we find an extremely low level of mixed authorship between practitioners and academics in two key Spanish LIS platforms of scientific/professional communication. In addition to this reduced participation in the joint signing of papers there is a progressive reduction in authors with a practitioner profile in EPI, and with an academic profile in the JED conferences. The data confirm that academia is abandoning the JED and practitioners are disappearing as authors in EPI. In any case, the final verdict on the gap will be delivered by the current audience levels (readers) of these mediums in each of the communities, together with users' opinions on how useful the publications are.

In all probability, the disappearance of practitioner sector authors from journals such as EPI must be contextualized in a professional communication environment which now includes the strong presence of new channels of cooperation via the social web (blogs, webinars, social networks, etc.). Moreover, the greater interaction and flexibility these channels offer practitioners has coincided with EPI's increased rigour in formal requirements and methodological foundation when accepting papers, as it attempts to adopt a more academic-scientific profile. This has discouraged practitioners from contributing, a situation exacerbated

---

[9] According to data from the Spanish Ministry of Education, Culture and Sport, between the 2005-2006 and 2014-15 academic years the predominance of LIS graduates always corresponded to women, with values ranging from 76% in the 2007-08 and 2010-11 years to 68.3% in 2014-15. The same Ministry indicates that in 2011-12 some 54.8% of university teachers of LIS were women, with that figure falling to 51.9% in 2014-15. Earlier statistical data does not exist (Spain. Gobierno de España, 2003–2015).

by the journal's change in business model, which now includes an article processing fee, and by subscriber numbers falling over recent years due to the prevailing adverse economic situation, a fact the publication itself acknowledges[10].

Furthermore, in the case of EPI the practitioner–academic gap widens for works related to the field of Communication, where the journal has explicitly broadened its scope over the last three years in its quest for a more diverse audience. However, no significant contributions have been noted from media professionals, especially in articles published without the participation of academic authors.

Finally, it is important to highlight that the gap is also characterized by a gender bias: there is greater participation by men in authorships with an academic profile in both EPI and the JED conferences, while women authors predominate only as practitioners in JED. Since the percentage of women in LIS studies is significantly higher than that of men, it seems obvious that policies should be put in place to rectify this anomaly and fully utilize the potential of the discipline's human resources.

Focusing exclusively on LIS (in other words, excluding Communication), the data in this study strengthen our conviction that practitioners and academics must be encouraged to work more closely again. This would have huge impact on enhancing the relevance and rigour of LIS publications in Spain and in other European countries where similar processes are making themselves felt or can actually be observed. Logically, such closer collaboration would also include cooperation with other professions and disciplines, an area in which the LIS academic sector should play an active role as the bridge with other fields of study. This would be particularly appropriate now, during the crisis and transformation currently being experienced both by information units or services and LIS university departments.

It is essential that the many actors involved in LIS in Spain – and Europe in general, according to the indicators we mention – analyze the situation and make a strong commitment to supporting and promoting common ground for practitioners and academics. Never before have specific information units and services or major institutions in the documentary field been subject to so much pressure to provide an innovative response to such a changing and

---

[10] http://www.elprofesionaldelainformacion.com/autores.html

uncertain environment. Spaces for development like the evidence-based librarianship advocated by Schlögl and Stock (2008) should therefore be explored.

Research that provides information and insight into professional practice – especially activities related to the transformation of that practice – should be heavily in demand, because it enhances quality in a field of knowledge as inherently practice-based as is LIS. Finally, the time has come to abandon the perverse Manichean dynamic that says works aimed at practitioners lack rigour and those done to justify or assess research have no relevance.

On the other hand there are some aspects for future research. So, despite the fact that practitioners with PhD studies are not plentiful, further studies are needed in order to go deep in this, because it is also an important source of joint research and publications. Moreover, the extent of practitioners' collaboration in LIS educational programs could also be quantified.

References

- Ardanuy J (2012) Scientific collaboration in Library and Information Science viewed through the Web of Knowledge: the Spanish case. *Scientometrics* 90(3): 877–890.

- Ardanuy J and Urbano C (2015a) Some research questions to frame a European Union (EU) overview of LIS research. In: *III International Seminar on Library and Information Science Education and Research (LIS-ER)*. Barcelona: Universitat de Barcelona. Available at: http://bd.ub.edu/liser/content/programme (accessed 17 July 2016).

- Ardanuy J and Urbano C (2015b). Una mirada italiana a la colaboración científica europea en Biblioteconomía, Información y Documentación (2010-2014). *Biblioteche oggi Trends*, 1(2): 71–82. English version available at http://diposit.ub.edu/dspace/bitstream/2445/102328/1/656412.pdf (accessed 10 November 2016).

- Bawden D (2005) Research and practice in documentation. *Journal of Documentation* 61(2), 169–170. Available at: www.emeraldinsight.com/doi/full/10.1108/jd.2005.27861baa.001 (accessed 17 July 2016).

- Bawden D (2008) Smoother pebbles and the shoulders of giants: the developing foundations of information science. *Journal of Information Science* 34(4): 415–426.

- Berg SA, Jacobs HL and Cornwall D (2012) Academic librarians and research: a study of Canadian library administrator perspectives. *College & Research Libraries* 74(6): 560–572.

- Booth A (2003) Bridging the research-practice gap? The role of evidence based librarianship. *New Review of Information and Library Research*, 9(1): 3–23.

- Booth A (2011) Barriers and facilitators to evidence-based library and information practice: an international perspective. *Perspectives in International Librarianship*, (1): 1–15.

- Brown CM and Ortega L (2005) Information-seeking behavior of physical science librarians: does research inform practice? *College & Research Libraries* 66(3), 231–247. DOI: 10.5860/crl.66.3.231

- Bushouse BK, Jacobson WS, Lambright KT, Llorens JJ, Morse RS and Poocharoen O (2011) Crossing the divide: building bridges between public administration practitioners and scholars. *Journal of Public Administration Research and Theory* 21 (Supplement 1), i99–i112. DOI: 10.1093/jopart/muq063

- Chanal V (2012) Building knowledge for innovation management: the experience of the Umanlab research team. *Vine* 42(3/4), 396–415.

- Chung AZQ and Shorrock ST (2011) The research-practice relationship in ergonomics and human factors – surveying and bridging the gap. *Ergonomics*, 54(4): 413–429.

- Clapton J (2010) Library and information science practitioners writing for publication: motivations, barriers and supports. *Library and Information Research* 34(106): 7–21.

- Cox A (2012) An exploration of the practice approach and its place in information science. *Journal of Information Science* 38(2): 176–188.

- Cruickshank P, Hall H and Taylor-Smith E (2011) *Enhancing the impact of LIS research projects*: RiLIES Project Report. Commissioned by the Research Information Network and the Library and Information Science Research Coalition. Edinburgh: Edinburgh Napier University. Available at: https://lisresearchcoalition.files.wordpress.com/2012/02/rilies1_report.pdf (accessed 1 July 2016).

- Dalton M (2013) A dissemination divide? The factors that influence the journal selection decision of Library & Information Studies (LIS) researchers and practitioners. *Library and Information Research* 37(115): 33–57.

- Delgado López-Cózar E (2001) ¿Por qué enseñar métodos de investigación en las facultades de biblioteconomía y documentación? *Anales de Documentación* (4): 51–71.

- Dongardive P (2013) Research in librarianship: an uneasy connection. *International Journal of Library Science* 2(3): 53–60.

- Eve J and Schenk N (2006) Research and practice: findings from the Interactions project. *Library and Information Research* 30(96): 36–46.

- Finlay CS, Sugimoto, CR, Li D and Russell TG (2012) LIS dissertation titles and abstracts (1930-2009): where have all the Librar* gone? *The Library Quarterly: Information, Community, Policy* 82(1): 29–46.

- Finlay SC, Ni C, Tsou A and Sugimoto CR (2013) Publish or practice? An examination of librarians' contributions to research. *Portal: Libraries and the Academy*, 13(4): 403–421.

- García-de-Cortázar ML, Arranz-Lozano F, Val-Cid C, Agudo-Arroyo Y, Viedma-Rojas A, Justo-

Suárez C and Pardo-Rubio P (2006). *Mujeres y hombres en la ciencia española: una investigación empírica*. Madrid: Instituto de la Mujer.

- Goulding A (2007) Searching for a research agenda for the Library and Information Science community. *Journal of Librarianship and Information Science* 39(3): 123–125.

- Greenwood CR and Abbott M (2001) The research to practice gap in Special Education. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children* 24(4): 276–289.

- Haddow G and Klobas J (2004) Communication of research to practice in library and information science: closing the gap. *Library and Information Science Research*, 26(1): 29–43.

- Hall H (2010) Promoting the priorities of practitioner research engagement. *Journal of Librarianship and Information Science* 42(2): 83–88.

- Hall H (2011) UK library and information science research matters. *Library & Information Science Research* 33(1): 89–91.

- Hjørland B. (2000) Library and information science: practice, theory and philosophical basis. *Information Processing & Management*, 36(3): 501–531.

- Hudgins CA and Allen-Meares P (2014) Translational research: a new solution to an old problem? *Journal of Social Work Education*, 36(1): 2–5.

- Järvelin K and Vakkari P (1993) The evolution of library and information science 1965–1985: a content analysis of journal articles. *Information Processing & Management* 29(1): 129–144.

- Joswick KE (1999) Article publication patterns of academic librarians: an Illinois case study. *College & Research Libraries*, 60(4): 340–349.

- Klobas J and Clyde L (2010) Beliefs, attitudes and perceptions about research and practice in a professional field. *Library & Information Science Research* 32(4): 237–245.

- McClure CR and Bishop A (1989) The status of research in Library/Information Science: guarded optimism. *College & Research Libraries* 50(2): 127–143.

- Maceviciute E, Wilson T, Lalloo I and Lindh M (2009) *A Delphi study of research needs for Swedish libraries*. Vetenskap för profession: rapport 5. Borås: University of Borås. Available

at: http://bada.hb.se/handle/2320/5069 (accessed 17 July 2016).

- McKee B (2007) Research into practice: prospects for a future framework. *Library and Information Research*, 31(97): 25–32.

- Mesny A and Mailhot C (2010) La collaboration entre chercheurs et praticiens en gestion: entre faux-semblants et nécessité épistémique. *Revue française de gestion*, 36(202): 33–45. DOI: 10.3166/rfg.202.33-45

- Moya-Anegón F, Jimenez-Contreras E and De la Moneda-Corrochano M (1998) Research fronts in library and information science in Spain (1985–1994). *Scientometrics*: 42(2): 229–246.

- Ponti M (2012) Peer production for collaboration between academics and practitioners. *Journal of Librarianship and Information Science*, 45(1): 23–37.

- Powell R, Baker L and Mika J (2002) Library and information science practitioners and research. *Library & Information Science Research*, 24(1): 49–72.

- Roberts A, Madden AD and Corrall S (2013) Putting research into practice: an exploration of Sheffield iSchool approaches to connecting research with practice. *Library Trends* 61(3): 479–512.

- Schlögl C and Stock WG (2008) Practitioners and academics as authors and readers: the case of LIS journals. *Journal of Documentation* 64(5): 643–666.

- Spain. Gobierno de España (2003-2015) Estadísticas e informes universitarios. Available at: www.mecd.gob.es/educacion-mecd/areas-educacion/universidades/estadisticas-informes/estadisticas.html (accessed 17 July 2016).

- Stewart C (2011) Whither Metrics, Part II. Tools for Assessing Publication Impact of Academic Library Practitioners. *The Journal of Academic Librarianship* 37(5): 445–448.

- Sugimoto CR, Tsou A, Naslund S, Hauser A, Brandon M, Winter D, Behles C and Finlay SC (2014) Beyond Gatekeepers of Knowledge: Scholarly Communication Practices of Academic Librarians and Archivists at ARL Institutions. *College & Research Libraries* 75(2): 145–161.

- Swigger K (1985) Institutional affiliations of authors of research articles. *Journal of Education for Library and Information Science* 26(2): 105-109.

- Thune T (2007) University–industry collaboration: the network embeddedness approach. *Science and Public Policy*, 34(3): 158–168. DOI: 10.3152/030234207X206902

- Torres-Salinas D, Muñoz-Muñoz AM and Jiménez-Contreras E (2011) Análisis bibliométrico de la situación de las mujeres investigadoras de Ciencias Sociales y Jurídicas en España. *Revista Española De Documentación Científica*, 34(1): 11–28.

- Tuomaala O, Järvelin K and Vakkari P (2014) Evolution of library and information science, 1965-2005: Content analysis of journal articles. *Journal of the Association for Information Science and Technology*, 65(7): 1446–1462.

- Van De Ven AH and Johnson PE (2006) Knowledge for theory and practice. A*cademy of Management Review*, 31(4): 802–821.

- Walters WH and Wilder EI (2016) Disciplinary, national, and departmental contributions to the literature of library and information science, 2007-2012. *Journal of the Association for Information Science and Technology*, 67(6): 1487–1506.

- Williamson C (1931) The place of research in library service. *The Library Quarterly* 1(1), 1–17.

- Wilson T and Maceviciute E (2009) What do practitioners want to see researched? *Library and Information Update*, (Nov.): 46–49.